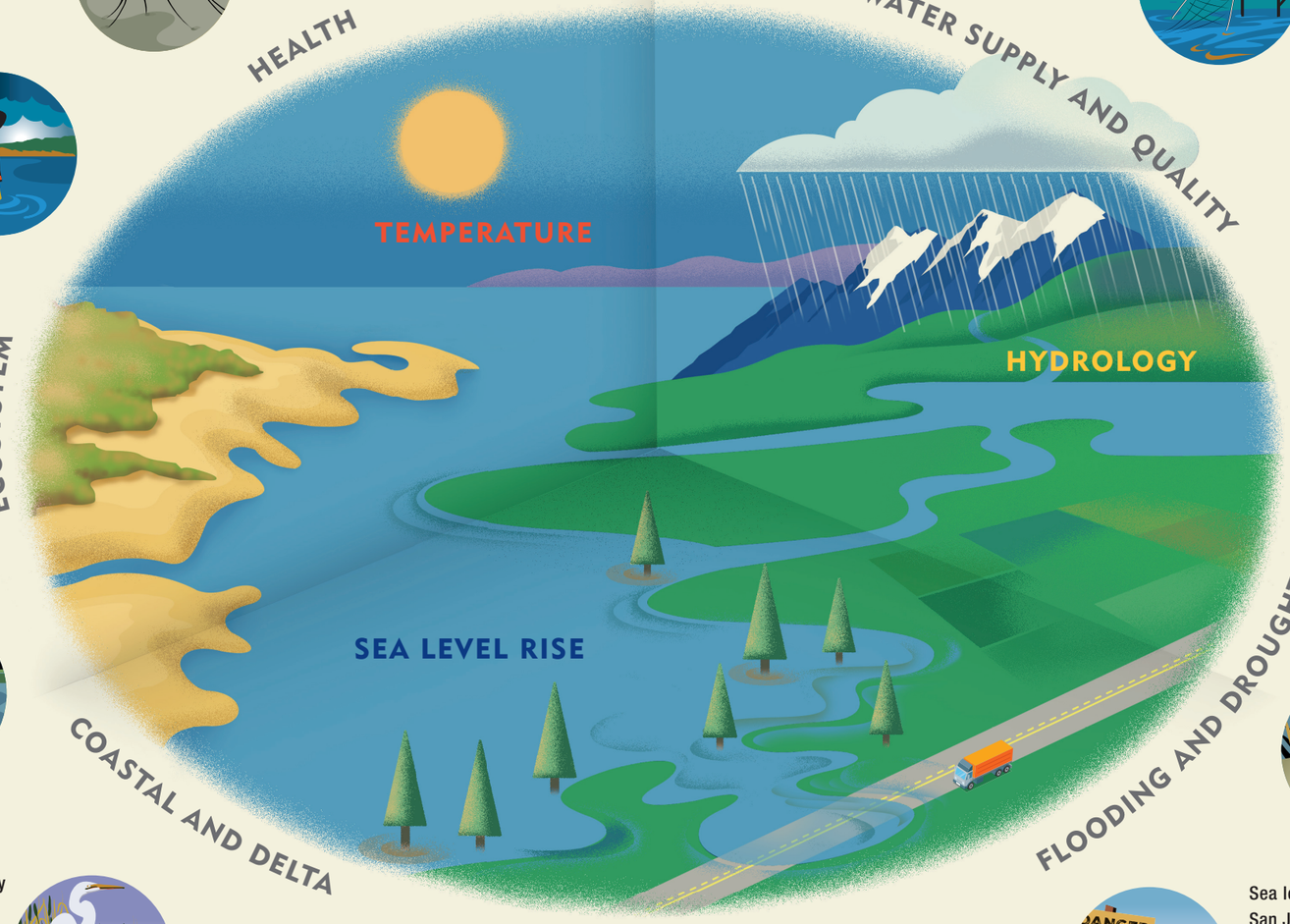
CLIMATE CHANGE EFFECTS
IN CALIFORNIA TRIBAL COMMUNITIES
WHAT ARE THE EXPECTED IMPACTS FROM THESE CHANGES?

Climate change is having a profound effect on California's landscape and resources as evidenced by changes in snowpack, variable fire regimes, and sea level rise. Scientific studies show that these changes have and will increase stress on the natural resources that tribal communities depend on.

This diagram was developed to assist tribal communities in identifying areas where they may be vulnerable to the anticipated impacts of climate change on a general scale. These impacts are projected to gradually increase during this century and beyond. Tribes can refer to the tribal matrices to identify vulnerabilities and adaptation strategies to the following impacts*.



Increased temperatures and extreme weather events can create a change in occurrence and spread of disease, as these changes may allow for mosquitoes and other insects to thrive, thereby increasing chronic and infectious disease.

More severe heat waves and extreme weather events threaten community health through increased displacement, which disrupts vital resources, local economy, personal income, social networks, and increases in mortality rates.

Forests, important contributors to subsistence activities and traditional and sacred practices, may be more vulnerable to pests, diseases, fire, and changes in species migration patterns and distribution.

Ocean acidification may result in ocean food web changes and the shift or loss in traditional aquatic species, such as shellfish which could impact coastal subsistence activities and traditional practices.

Higher water temperatures and changes in salinity may make the Sacramento and San Joaquin River Delta and other estuaries, intolerable to some native fish species and result in estuarine food web changes.

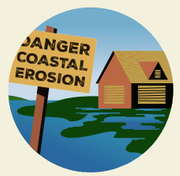
Changes in amount and timing of stream flow can impact tribal water systems, degrade water quality, contribute to habitat disturbance and loss, and disrupt subsistence fishing.

A shift to more rain and less snow, associated with higher air temperatures, reduces water supply reliability, and hurts spawning and recruitment success of native fishes.

Increased temperatures and changes in precipitation may lead to longer, more intense droughts, reducing productivity, further stress traditional fish, plant, and animal species, and cause damage or exposure of cultural resources.

Increased flooding can damage sacred sites and impede access to them, damage artifacts and remains, and impact traditional plant and animal species.

Sea level rise threatens coastal and Sacramento San Joaquin Delta communities, infrastructure, and tidal wetlands along with the possible inundation or loss of access to sacred sites.



*Tribal matrices http://www.water.ca.gov/climatechange/